Odors from the BP Oil Spill

- Residents of the Gulf Coast are concerned about odors and whether they are harmful to breathe. Recently, residents along the coast are reporting smelling odors, and experiencing eye, nose, or throat irritation, nausea, or headaches.

- Our sense of smell is very sensitive and we often can smell things at levels below the levels that could be harmful. However, an odor does indicate that something is in the air, and it is important to determine what it is and whether it is at a level of concern. Some people are also more sensitive to smell than others.

- EPA is also concerned about the odors and any long-lasting health effects from the pollutants causing the odors. We have been particularly concerned about pollutants that could reach shore from the burn of oil and pollutants that may evaporate from the spill as it spreads closer to shore, potentially impacting residents along the shoreline.

- Since late April, EPA has been monitoring the air at multiple sites along the Gulf Coast for certain pollutants that are associated with petroleum products and from the burning oil out at sea.

- Some of the chemicals we are monitoring have a strong smell. Some of these chemicals may cause short-lived health effects like headache, eye, nose and throat irritation, or nausea. People can smell these chemicals at levels well below those that would cause serious short-term or long-term health problems.

- We have recently begun monitoring for pollutants that may evaporate from "weathered" oil - the name given to oil after many pollutants have already evaporated from it. People may be able to smell some of these compounds as well.

- For up to date information on air quality along the Gulf Coast, please see http://www.epa.gov/bpspill/air.html

"Rotten Egg" Odor

- If you smell a 'rotten egg' odor, you may be smelling hydrogen sulfide (H_2S).
- H_2S is associated with oil and natural gas extraction. It can also come from marshes and sewage treatment plants.
- The levels we are seeing are not high enough to cause long lasting effects – but people may experience eye or throat irritation, or headaches. The effects should go away when H_2S levels diminish, or when a person leaves the area.
- We do not know the exact source of H_2S in these areas. We are only finding H_2S at one monitor at a time, not at nearby monitors at the same time. This indicates that the source is unlikely to be from the oil spill and is more likely coming from a localized source.

"Gas Station-Like" Odor

- If you smell a 'gas station' like odor – the odor you might smell while filling up your car – you may be smelling volatile organic compounds, or VOCs.

- VOCs evaporate from the oil. They are the most toxic components of crude oil when inhaled. Many of them are also associated with long-term health effects and some are carcinogens. The key toxic VOCs in oil are benzene, toluene, ethylbenzene, and xylene.
- We are measuring very low levels of VOCs. For example, the current measured benzene concentrations at monitors along the Gulf have been no higher than 4 micrograms per cubic meter. For comparison, measured benzene levels found at gas pumps can range from 25 to 100 micrograms per cubic meters.
- This is what we expect to see – historical data on oil spills indicate that volatile organics are likely to evaporate, disperse and/or react quickly after the oil reaches the surface of the water. Also, from what we understand, the oil from this spill contains relatively low levels of these pollutants to begin with.

"Oily" or "Tar-Like" smell

- Information we have obtained to date indicates that there are chemicals remaining in the weathered oil known as semi-volatile organic compounds (or SVOCs) and asphaltenes, and they are primarily responsible for the "oily odors."
- EPA is conducting specific tests designed to quantify the amounts of SVOCs in the air on-shore near the oil slick to determine if any of them might be present in unsafe levels. We will be reporting the results of those tests as soon as we have results. We expect this to be within a week.
- As we get information about specific SVOCs present, we will be providing additional information about potential health concerns related to these specific compounds.